



## QUIZZES

Unit-6 (Chemical Bonding)



50 Questions



50 min

### Topics

Unit-6 (Chemical Bonding)

Start Quiz

49 : 58



1/50



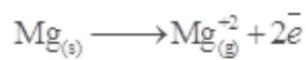
50 min



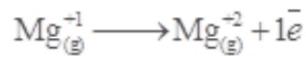
Hint

Q : Which of the following correctly represents the 2<sup>nd</sup> ionization energy of Mg

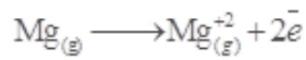
A



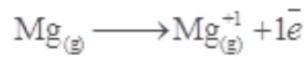
B



C



D



1

2

3

4

5

6

7

8

9

49 : 56



2/50



50 min



Hint

Q : General electronic configuration of p-block elements are given, Which of the following element has maximum first ionization energy

A

 $ns^2, np^2$ 

B

 $ns^2, np^3$ 

C

 $ns^2, np^4$ 

D

 $ns^2, np^1$ 

1

2

3

4

5

6

7

8

9

49 : 54



3/50



50 min



Hint

Q : The molecule which has strongest bond is

A F-F

B Cl-Cl

C Br-Br

D I-I

1

2

3

4

5

6

7

8

9

49 : 53



4/50



50 min



Hint

Q : In which of the following compound, all carbon atoms show  $sp^2$  hybridization



Carbon dioxide



Propene



1, 3-Butadiene



Ethane nitrile

1

2

3

4

5

6

7

8

9

49 : 51



5/50



50 min



Hint

Q : Which of the following is most ionic in nature

A Sodium chloride

B Sodium fluoride

C Sodium bromide

D Sodium iodide

1

2

3

4

5

6

7

8

9

49 : 49



6/50



50 min



Hint

Q : The compound which has maximum electronic repulsions is

A

$\text{H}_2\text{O}$

B

$\text{NH}_3$

C

$\text{NH}_4^+$

D

$\text{CH}_4$

1

2

3

4

5

6

7

8

9

49 : 48



7/50



50 min



Hint

Q : Octet rule is followed by the central atom of \_\_\_\_\_ molecule

A

$\text{BF}_3$

B

$\text{SO}_2$

C

$\text{SF}_6$

D

$\text{CCl}_4$

1

2

3

4

5

6

7

8

9

49 : 45



8/50



50 min



Hint

Q : Benzene contains delocalized  $\pi$ -electronic cloud due to

A  $sp^2-sp^2$  overlapping

B s-p overlapping

C  $sp^2-s$  overlapping

D  $p_z - p_z$  overlapping



9/50



50 min



Hint

Q :

Some properties are given below. Which corresponds to  $\text{PCl}_3$

(i)  $\text{sp}^2$  hybridization (ii) Polar      (iii) Trigonal pyramidal  
(iv)  $\text{AB}_3$  type molecule



i, ii, and iii



ii, iii and iv



ii and iii



i, ii, iii and iv

49 : 41



10/50



50 min



Hint

Q : When bond order increases, then bond length becomes  
\_\_\_\_\_ and bond becomes \_\_\_\_\_

A Shorter, stronger

B Longer, weaker

C Shorter, weaker

D Longer, stronger

8

9

10

11

12

13

14

15

16

49 : 39



11/50



50 min



Hint

Q : The pair of compounds having same geometry and hybridization

A

 $\text{SO}_3, \text{NH}_3$ 

B

 $\text{H}_2\text{S}, \text{H}_2\text{O}$ 

C

 $\text{CdCl}_2, \text{PCl}_3$ 

D

 $\text{SO}_2, \text{BeCl}_2$ 

8

9

10

11

12

13

14

15

16

49 : 37



12/50



50 min



Hint

Q : Possible bonds formed by overlapping of p-p orbitals  
is/are

A

$\sigma$ -bond

B

Both  $\sigma$  and  $\pi$

C

$\pi$ -bond

D

None of these

8

9

10

11

12

13

14

15

16

49 : 36



13/50



50 min



Hint

Q : % age of covalent bond in  $\text{H}_3\text{O}^+$  is

A

33%

B

25%

C

75%

D

66%

8

9

10

11

12

13

14

15

16

49 : 35



14/50



50 min



Hint

Q : Strength of bond depends upon the following factors except

- A E.N difference between bonded atoms
- B Sizes of the atoms
- C Bond length
- D Shielding effect

8

9

10

11

12

13

14

15

16

49 : 33



15/50



50 min



Hint

Q : The distance between the nuclei of two atoms forming covalent bond is called

A Covalent radius

B Bond angle

C Atomic radius

D Bond length

8

9

10

11

12

13

14

15

16

49 : 32



16/50



50 min



Hint

Q : Which one of the following has minimum electron affinity value

A

O

B

Se

C

S

D

Te

8

9

10

11

12

13

14

15

16

49 : 29



17/50



50 min



Hint

Q : Which among the following has net dipole moment

A CH<sub>4</sub>

B BF<sub>3</sub>

C NH<sub>3</sub>

D CCl<sub>4</sub>

15

16

17

18

19

20

21

22

23

49 : 28



18/50



50 min



Hint

Q : Which overlapping may not lead to sigma bond formation

A

p-p in fluorine

B

s-p in hydrogen fluoride

C

$sp^2-sp^2$  in benzene

D

p-p in ethene

15

16

17

18

19

20

21

22

23

49 : 26



19/50



50 min



Hint

Q : Which of the following molecule contains maximum number of lone pairs

A Chlorine

B Oxygen

C Carbon dioxide

D Hydrogen chloride

15

16

17

18

19

20

21

22

23

49 : 25



20/50



50 min



Hint

Q : Correct statement when coordinate covalent bond is formed between  $\text{NH}_3$  and  $\text{BF}_3$

A Ammonia is Lewis acid

B Fluorine accepts lone pair due to its high electronegativity

C Nitrogen of ammonia donates its lone pair to 2p orbital of Boron

D Coordinate covalent bond is also called non-polar bond

15

16

17

18

19

20

21

22

23

49 : 24



21/50



50 min



Hint

Q : Which one is AB<sub>4</sub> type molecule

A

SO<sub>3</sub>

B

BF<sub>3</sub>

C

SO<sub>2</sub>

D

H<sub>2</sub>S

15

16

17

18

19

20

21

22

23

49 : 22



22/50



50 min



Hint

Q : According to VSEPR theory, which is angular in its structure

A

$\text{BF}_3$

B

$\text{SO}_2$

C

$\text{BeCl}_2$

D

$\text{NH}_3$

15

16

17

18

19

20

21

22

23



23/50



50 min



Hint

Q : During formation of ammonium ion from ammonia and hydrogen ion, there is no change in hybridization ( $sp^3$ ) but bond angle is changed from  $107.5^\circ$  in ammonia to almost- \_\_\_\_\_ in ammonium ion

A

 $104.5^\circ$ 

B

 $120^\circ$ 

C

 $109.5^\circ$ 

D

 $92^\circ$

49 : 18



24/50



50 min



Hint

Q :

In which of the following compound, central element is electron deficient

A



B



C



D



20

21

22

23

24

25

26

27

28

49 : 16



25/50



50 min



Hint

Q : Which one of the following shows minimum bond angle

A  $\text{BF}_3$

B  $\text{NF}_3$

C  $\text{CH}_4$

D  $\text{H}_2\text{O}$

20

21

22

23

24

25

26

27

28

49 : 15



26/50



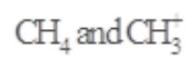
50 min



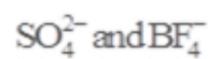
Hint

Q : Which of following pair contains iso-structural species

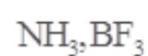
A



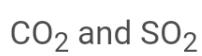
B



C



D



20

21

22

23

24

25

26

27

28

49 : 13



27/50



50 min



Hint

Q : Which of the following compounds is non-polar

A CHCl<sub>3</sub>

B CO

C SO<sub>2</sub>

D CO<sub>2</sub>

20

21

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23

24

25

26

27

28



28/50



50 min



Hint

Q :

When the two partially filled atomic orbitals overlap in such a way that probability of finding the electron is maximum around the line joining the two nuclei, the result is the formation of

A Pi bond

B Sigma bond

C Hydrogen bond

D Metallic bond

49 : 07



29/50



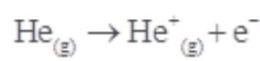
50 min



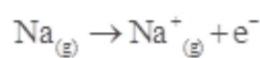
Hint

Q : Which one of the following processes requires the highest amount of energy

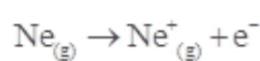
A



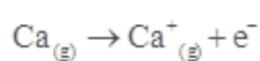
B



C



D



27

28

29

30

31

32

33

34

35

49 : 05



30/50



50 min



Hint

Q : The valence shell is

- A The highest energy level occupied by electrons
- B The set of orbitals used to make triple bonds
- C The orbitals belonging to the entire molecule
- D The lowest energy level occupied by electrons

27

28

29

30

31

32

33

34

35

49 : 04



31/50



50 min



Hint

Q :  $\text{CH}_4$  is a nonpolar molecule. Which of the following similar molecules is also non-polar

A  $\text{CH}_3\text{Cl}$

B  $\text{SiH}_3\text{Cl}$

C  $\text{CH}_2\text{Cl}_2$

D  $\text{SiH}_4$

27

28

29

30

31

32

33

34

35

49 : 02



32/50



50 min



Hint

Q : The I.E. of nitrogen is more than that of oxygen due to the



A The smallest size of nitrogen



B The extra stability of the half-filled p orbitals



C More penetrating effect



D The greater attraction of electron by the nucleus

27

28

29

30

31

32

33

34

35

49 : 01



33/50



50 min



Hint

Q : The elements of group \_\_\_\_\_ shows abnormal low values of electron affinity in every period of periodic table

A IIIA and VIA

B IIA, VA and VIIA

C IIA and VIIIA

D IIA, VA and VIIIA

27

28

29

30

31

32

33

34

35



34/50



50 min



Hint

Q : The incorrect statement among the following is



The first ionization energy of Al is less than the first I.E. of Mg



The second ionization energy of Mg is greater than the second I.E. of Na



The first ionization energy of Na is less than the first I.E. of Mg



The third I.E. of Mg is greater than that of Al

48 : 57



35/50



50 min



Hint

Q : Which one of the following will have smallest radius?

A  $\text{Al}^{3+}$

B  $\text{Mg}^{2+}$

C  $\text{Si}^{4+}$

D  $\text{Na}^{2+}$

27

28

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32

33

34

35

48 : 55



36/50



50 min



Hint

Q : Which one of the following molecules has the highest dipole moment

A

$\text{H}_2\text{S}$

B

$\text{H}_2\text{O}$

C

$\text{SO}_2$

D

$\text{CS}_2$

33

34

35

36

37

38

39

40

41

48 : 53



37/50



50 min



Hint

Q : All the atoms are coplanar in the molecule\_\_\_\_\_

A CH<sub>4</sub>

B PH<sub>3</sub>

C BF<sub>3</sub>

D NH<sub>3</sub>

33

34

35

36

37

38

39

40

41

48 : 52



38/50



50 min



Hint

Q : Bonding in phosphonium ion is \_\_\_\_\_ percent covalent

A 25

B 50

C 33

D 75

33

34

35

36

37

38

39

40

41

48 : 49



39/50



50 min



Hint

Q : Formation of MgO is an example of

A

Ionic bond

B

Polar covalent bond

C

Non-polar Covalent bond

D

Double Covalent bond

33

34

35

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37

38

39

40

41

48 : 48



40/50



50 min



Hint

Q : The bond between H-H is

A

Stronger than the bond between C-C

B

Weaker than the bond between C-C

C

Neither stronger nor weaker than the bond between C-C

D

Not comparable

33

34

35

36

37

38

39

40

41

48 : 46



41/50



50 min



Hint

Q : Which hybrid orbitals are used for bonding in triangular pyramidal molecule

A

$sp^2$

B

$dsp^2$

C

$sp$

D

$sp^3$

33

34

35

36

37

38

39

40

41

48 : 44



42/50



50 min



Hint

Q : The hybridization state of 'S' in  $\text{SO}_3$  is similar to that of



C in  $\text{C}_2\text{H}_2$



C in  $\text{CO}_2$



C in  $\text{C}_2\text{H}_6$



C in  $\text{C}_2\text{H}_4$

40

41

42

43

44

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47

48

48 : 42



43/50



50 min



Hint

Q : Which of the following is NOT tetrahedral

A



B



C



D



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46

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48

48 : 41



44/50



50 min



Hint

Q : Which one is correct dot and cross diagram of CO<sub>2</sub>

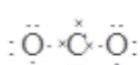
A



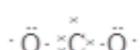
B



C



D



40

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48

48 : 40



45/50



50 min



Hint

Q : The electron affinity is the measure of the attraction of the nucleus of an atom for

A Valance electron

B Inner shell electron

C Extra incoming electron

D Last electron

40

41

42

43

44

45

46

47

48



46/50



50 min



Hint

Q : The ionization energies of an element are given below



The element X may belong to

A IVA

B IIIA

C IIA

D IA

48 : 37



47/50



50 min



Hint

Q : In the resonance structure of benzene the number of s-bonds and p delocalized electrons are respectively

A 12 and 6

B 6 and 6

C 6 and 3

D 12 and 3

40

41

42

43

44

45

46

47

48

48 : 35



48/50



50 min



Hint

Q : The hybridization associated with the central atom of a molecule in which all the bond angles are  $120^\circ$  is

A sp

B  $sp^3$

C  $sp^2$

D  $dsp^3$

40

41

42

43

44

45

46

47

48

48 : 33



49/50



50 min



Hint

Q :

Choose the species that is incorrectly matched with the shape of the central atom

A

$\text{CF}_4$  tetrahedral

B

$\text{H}_2\text{O}$  tetrahedral

C

$\text{BeCl}_2$  linear

D

$\text{NH}_3$  pyramidal

42

43

44

45

46

47

48

49

50

48 : 31



50/50



50 min



Hint

Q : Correct order of H-N-H angle for the species  $\text{NH}_3$ ,  $\text{NH}_4^+$  and  $\text{NH}_2^-$

A

 $\text{NH}_2^- > \text{NH}_4^+ > \text{NH}_3$ 

B

 $\text{NH}_4^+ > \text{NH}_3 > \text{NH}_2^-$ 

C

 $\text{NH}_3 > \text{NH}_4^+ > \text{NH}_2^-$ 

D

 $\text{NH}_3 > \text{NH}_2^- > \text{NH}_4^+$ 

42

43

44

45

46

47

48

49

50



## QUIZ RESULT

### Unit-6 (Chemical Bonding)



50



15-Jun-2021



50 min



0 sec



0/50



0.0%

[Result Detail](#)

Correct	0
Incorrect	0
Unattempted	50

Chemistry

0%



Correct



Unattempted

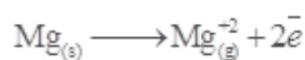
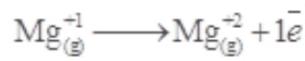
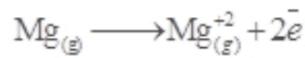
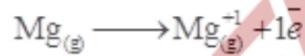


Incorrect



1/50

Q : Which of the following correctly represents the 2<sup>nd</sup> ionization energy of Mg

**A****B****C****D**

 Correct Unattempted Incorrect Q 2/50

Q : General electronic configuration of p-block elements are given, Which of the following element has maximum first ionization energy

A  $ns^2, np^2$

B  $ns^2, np^3$

C  $ns^2, np^4$

D  $ns^2, np^1$



## Unit-6 (Chemical Bonding)

Correct

Unattempted

Incorrect

Q 3/50

Q : The molecule which has strongest bond is

A F-F

B Cl-Cl

C Br-Br

D I-I



Correct



Unattempted



Incorrect



4/50

Q : In which of the following compound, all carbon atoms show  $sp^2$  hybridization

**A**

Carbon dioxide

**B**

Propene

**C**

1, 3-Butadiene

**D**

Ethane nitrile



Correct

Unattempted

Incorrect

5/50

Q : Which of the following is most ionic in nature

A Sodium chloride

B Sodium fluoride

C Sodium bromide

D Sodium iodide

 Correct Unattempted Incorrect Q 6/50

Q : The compound which has maximum electronic repulsions is

A H<sub>2</sub>O

B NH<sub>3</sub>

C NH<sub>4</sub><sup>+</sup>

D CH<sub>4</sub>



Correct



Unattempted



Incorrect



7/50

Q : Octet rule is followed by the central atom of \_\_\_\_\_ molecule

A

BF3

B

SO2

C

SF6

D

CCl4



## Unit-6 (Chemical Bonding)

● Correct

● Unattempted

● Incorrect

Q 8/50

Q : Benzene contains delocalized  $\pi$ -electronic cloud due to

A  $sp^2-sp^2$  overlapping

B s-p overlapping

C  $sp^2-s$  overlapping

D  $p_z - p_z$  overlapping

 Correct Unattempted Incorrect Q 9/50

Q :

Some properties are given below. Which corresponds to  $\text{PCl}_3$

(i)  $\text{sp}^2$  hybridization (ii) Polar      (iii) Trigonal pyramidal  
(iv)  $\text{AB}_3$  type molecule

A i, ii, and iii

B ii, iii and iv

C ii and iii

D i, ii, iii and iv

 Correct Unattempted Incorrect Q 10/50

Q : When bond order increases, then bond length becomes  
\_\_\_\_\_ and bond becomes \_\_\_\_\_

A Shorter, stronger

B Longer, weaker

C Shorter, weaker

D Longer, stronger



Correct



Unattempted



Incorrect



11/50

Q : The pair of compounds having same geometry and hybridization

A

 $\text{SO}_3, \text{NH}_3$ 

B

 $\text{H}_2\text{S}, \text{H}_2\text{O}$ 

C

 $\text{CdCl}_2, \text{PCl}_3$ 

D

 $\text{SO}_2, \text{BeCl}_2$

 Correct Unattempted Incorrect Q 12/50

Q : Possible bonds formed by overlapping of p-p orbitals is/are

A σ-bond

B Both σ and π

C π-bond

D None of these



## Unit-6 (Chemical Bonding)

Correct

Unattempted

Incorrect

Q 13/50

Q : % age of covalent bond in  $\text{H}_3\text{O}^+$  is

A

B

C

D

9

10

11

12

13

14

15

16

17

 Correct Unattempted Incorrect Q 14/50

Q : Strength of bond depends upon the following factors except

A E.N difference between bonded atoms

B Sizes of the atoms

C Bond length

D Shielding effect



Correct



Unattempted



Incorrect



15/50

Q : The distance between the nuclei of two atoms forming covalent bond is called

A Covalent radius

B Bond angle

C Atomic radius

D Bond length

 Correct Unattempted Incorrect Q 16/50

Q : Which one of the following has minimum electron affinity value

 A O B Se C S D Te

 Correct Unattempted Incorrect Q 17/50

Q : Which among the following has net dipole moment

A CH<sub>4</sub>

B BF<sub>3</sub>

C NH<sub>3</sub>

D CCl<sub>4</sub>

 Correct Unattempted Incorrect Q 18/50

Q : Which overlapping may not lead to sigma bond formation

A p-p in fluorine

B s-p in hydrogen fluoride

C  $sp^2$ - $sp^2$  in benzene

D p-p in ethene



Correct



Unattempted



Incorrect



19/50

Q : Which of the following molecule contains maximum number of lone pairs



Chlorine



Oxygen



Carbon dioxide



Hydrogen chloride



Correct



Unattempted



Incorrect



20/50

Q : Correct statement when coordinate covalent bond is formed between  $\text{NH}_3$  and  $\text{BF}_3$

A Ammonia is Lewis acid

B Fluorine accepts lone pair due to its high electronegativity

C Nitrogen of ammonia donates its lone pair to 2p orbital of Boron

D Coordinate covalent bond is also called non-polar bond

 Correct Unattempted Incorrect Q 21/50

Q : Which one is  $AB_4$  type molecule

A  $SO_3$

B  $BF_3$

C  $SO_2$

D  $H_2S$

 Correct Unattempted Incorrect Q 22/50

Q : According to VSEPR theory, which is angular in its structure

A BF3

B SO2

C BeCl2

D NH3

 Correct Unattempted Incorrect Q 23/50

Q : During formation of ammonium ion from ammonia and hydrogen ion, there is no change in hybridization ( $sp^3$ ) but bond angle is changed from  $107.5^\circ$  in ammonia to almost \_\_\_\_\_ in ammonium ion

 A  $104.5^\circ$  B  $120^\circ$  C  $109.5^\circ$  D  $92^\circ$

 Correct Unattempted Incorrect Q 24/50

Q :

In which of the following compound, central element is electron deficient

 A CH<sub>4</sub> B BF<sub>3</sub> C NH<sub>3</sub> D SiCl<sub>4</sub>

 Correct Unattempted Incorrect Q 25/50

Q : Which one of the following shows minimum bond angle

A  $\text{BF}_3$

B  $\text{NF}_3$

C  $\text{CH}_4$

D  $\text{H}_2\text{O}$

 Correct Unattempted Incorrect Q 26/50

Q : Which of following pair contains iso-structural species

A  $\text{CH}_4$  and  $\text{CH}_3^+$

B  $\text{SO}_4^{2-}$  and  $\text{BF}_4^-$

C  $\text{NH}_3$ ,  $\text{BF}_3$

D  $\text{CO}_2$  and  $\text{SO}_2$

 Correct Unattempted Incorrect Q 27/50

Q : Which of the following compounds is non-polar

A CHCl<sub>3</sub>

B CO

C SO<sub>2</sub>

D CO<sub>2</sub>

 Correct Unattempted Incorrect Q 28/50

Q :

When the two partially filled atomic orbitals overlap in such a way that probability of finding the electron is maximum around the line joining the two nuclei, the result is the formation of

 A Pi bond B Sigma bond C Hydrogen bond D Metallic bond



Correct



Unattempted



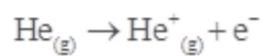
Incorrect



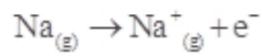
29/50

Q : Which one of the following processes requires the highest amount of energy

A



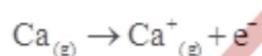
B



C



D





Correct

Unattempted

Incorrect

Q 30/50

Q : The valence shell is

A The highest energy level occupied by electrons

B The set of orbitals used to make triple bonds

C The orbitals belonging to the entire molecule

D The lowest energy level occupied by electrons

 Correct Unattempted Incorrect Q 31/50

Q :  $\text{CH}_4$  is a nonpolar molecule. Which of the following similar molecules is also non-polar

A  $\text{CH}_3\text{Cl}$

B  $\text{SiH}_3\text{Cl}$

C  $\text{CH}_2\text{Cl}_2$

D  $\text{SiH}_4$

 Correct Unattempted Incorrect Q 32/50

Q : The I.E. of nitrogen is more than that of oxygen due to the

A The smallest size of nitrogen

B The extra stability of the half-filled p orbitals

C More penetrating effect

D The greater attraction of electron by the nucleus

 Correct Unattempted Incorrect Q 33/50

Q : The elements of group \_\_\_\_\_ shows abnormal low values of electron affinity in every period of periodic table

A IIIA and VIA

B IIA, VA and VIIA

C IIA and VIIIA

D IIA, VA and VIIIA

 Correct

Unattempted

 Incorrect

34/50

Q : The incorrect statement among the following is

A The first ionization energy of Al is less than the first I.E. of Mg

B The second ionization energy of Mg is greater than the second I.E. of Na

C The first ionization energy of Na is less than the first I.E. of Mg

D The third I.E. of Mg is greater than that of Al

 Correct Unattempted Incorrect Q 35/50

Q : Which one of the following will have smallest radius?

A  $\text{Al}^{3+}$

B  $\text{Mg}^{2+}$

C  $\text{Si}^{4+}$

D  $\text{Na}^{2+}$

 Correct Unattempted Incorrect Q 36/50

Q : Which one of the following molecules has the highest dipole moment

A H<sub>2</sub>S

B H<sub>2</sub>O

C SO<sub>2</sub>

D CS<sub>2</sub>

 Correct Unattempted Incorrect Q 37/50

Q : All the atoms are coplanar in the molecule\_\_\_\_\_

A CH<sub>4</sub>

B PH<sub>3</sub>

C BF<sub>3</sub>

D NH<sub>3</sub>



## Unit-6 (Chemical Bonding)

● Correct

● Unattempted

● Incorrect

Q 38/50

Q : Bonding in phosphonium ion is \_\_\_\_\_ percent covalent

A 25

B 50

C 33

D 75

34

35

36

37

38

39

40

41

42

 Correct Unattempted Incorrect Q 39/50

Q : Formation of MgO is an example of

A Ionic bond

B Polar covalent bond

C Non-polar Covalent bond

D Double Covalent bond

 Correct Unattempted Incorrect Q 40/50

Q : The bond between H-H is

A Stronger than the bond between C-C

B Weaker than the bond between C-C

C Neither stronger nor weaker than the bond between C-C

D Not comparable



Correct



Unattempted



Incorrect



41/50

Q : Which hybrid orbitals are used for bonding in triangular pyramidal molecule

 A $sp^2$  B $dsp^2$  C $sp$  D $sp^3$ 

34

35

36

37

38

39

40

41

42

 Correct Unattempted Incorrect Q 42/50

Q : The hybridization state of 'S' in  $\text{SO}_3$  is similar to that of

A C in  $\text{C}_2\text{H}_2$

B C in  $\text{CO}_2$

C C in  $\text{C}_2\text{H}_6$

D C in  $\text{C}_2\text{H}_4$

 Correct Unattempted Incorrect Q 43/50

Q : Which of the following is NOT tetrahedral

A  $\text{BF}_4^-$

B  $\text{SO}_4^{2-}$

C  $\text{NH}_4^+$

D  $\text{CO}_3^{2-}$



Correct

Unattempted

Incorrect

Q 44/50

Q : Which one is correct dot and cross diagram of CO<sub>2</sub>

A :  $\ddot{\text{O}}:\times\text{C}\ddot{\text{x}}:\ddot{\text{O}}:$

B :  $\ddot{\text{O}}:\ddot{\text{x}}\text{C}\ddot{\text{x}}:\ddot{\text{O}}:$

C :  $\ddot{\text{O}}-\ddot{\text{x}}\text{C}\ddot{\text{x}}-\ddot{\text{O}}:$

D :  $\ddot{\text{O}}-\ddot{\text{x}}\text{C}\ddot{\text{x}}-\ddot{\text{O}}:$



Correct



Unattempted



Incorrect



45/50

Q : The electron affinity is the measure of the attraction of the nucleus of an atom for

A Valance electron

B Inner shell electron

C Extra incoming electron

D Last electron

 Correct Unattempted Incorrect Q 46/50

Q : The ionization energies of an element are given below



The element X may belong to

 A IVA B IIIA C IIA D IA



Correct



Unattempted



Incorrect



47/50

Q : In the resonance structure of benzene the number of s-bonds and p delocalized electrons are respectively

A 12 and 6

B 6 and 6

C 6 and 3

D 12 and 3

 Correct Unattempted Incorrect Q 48/50

Q : The hybridization associated with the central atom of a molecule in which all the bond angles are  $120^\circ$  is

 A sp B  $sp^3$  C  $sp^2$  D  $dsp^3$

 Correct Unattempted Incorrect Q 49/50

Q :

Choose the species that is incorrectly matched with the shape of the central atom

A  $\text{CF}_4$  tetrahedral

B  $\text{H}_2\text{O}$  tetrahedral

C  $\text{BeCl}_2$  linear

D  $\text{NH}_3$  pyramidal



Correct



Unattempted



Incorrect



50/50

Q : Correct order of H-N-H angle for the species  $\text{NH}_3$ ,  $\text{NH}_4^+$  and  $\text{NH}_2^-$

**A** $\text{NH}_2^- > \text{NH}_4^+ > \text{NH}_3$ **B** $\text{NH}_4^+ > \text{NH}_3 > \text{NH}_2^-$ **C** $\text{NH}_3 > \text{NH}_4^+ > \text{NH}_2^-$ **D** $\text{NH}_3 > \text{NH}_2^- > \text{NH}_4^+$